



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

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ATLANTA, GEORGIA 30303-8960

June 8, 2009

Dr. Rebecca S. Griffith  
Chief, Planning Division  
U.S. Army Corps of Engineers  
Jacksonville District  
P.O. Box 4970  
Jacksonville, FL 32232-0019

ATTN: Bradley Tarr

Subject: EPA Review of the COE's "C-111 Spreader Canal Western Project Draft  
Project Implementation Report and Environmental Impact Statement";  
CEQ# 20090117; ERP# COE-E39078-FL

Dear Dr. Griffith:

Pursuant to Section 102(2)(C) of the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, the U.S. Environmental Protection Agency (EPA) has reviewed the U.S. Army Corps of Engineers' (COE) Draft Environmental Impact Statement (DEIS) for the subject C-111 Spreader Canal (C-111 SC) Western Project. This Comprehensive Everglades Restoration Plan (CERP) project sponsored by the South Florida Water Management District (SFWMD) has changed from its original Restudy design and was divided into a Western and Eastern Project. The present Western Project primarily addresses changes in western flows through Taylor Slough to restore wetlands and to moderate/stabilize salinities in Florida Bay. The prospective Eastern Project is to cover the remaining project area and ultimately include the backfilling of the C-111 Canal.

Concurrently with this DEIS, EPA also received a copy of the Draft Environmental Assessment (DEA) on the "C-111 Spreader Canal Design Test", which will serve as a pilot study for the design of the Eastern Project. The Spreader Canal feature will not be implemented under the current C-111 SC Western Project but is expected to be a major component of the overall project. We support such pilot studies and will defer the finalization of the DEA to the COE, since we assume that the resultant Final EA (FEA) will be consistent with the objectives of the present DEIS and improve water quantity and quality in the project area. Accordingly, we recommend that the development of the FEA remain within the context of the DEIS and apply our present comments on the DEIS as appropriate.

## **Background**

The DEIS for the C-111 SC Western Project addresses the restoration of the ecological functions of Taylor Slough and Florida Bay in the Everglades National Park (ENP), for the benefit of Florida Bay, Southern Glades, Model Land and other wetland and estuarine areas. The Western Project is essential in the CERP restoration of downstream waters to Florida Bay through Taylor Slough using available waters. The project would function to regulate and improve the quantity, timing and distribution (QTD) of these flows and to increase hydroperiods. Several structural changes are proposed, including the creation of a nine-mile-long hydraulic ridge east of the ENP and a water control structure in the lower portion of C-111, as well as modifications of existing S-18C, S-20, S-20A and the C-110 Canal. The hydraulic ridge is to consist of the Frog Pond Retention Area and Aerojet Canal west of the C-111 Canal, and their pumping stations. This ridge is to prevent groundwater flows from entering the Canal from the ENP, so that the groundwater is retained in Taylor Slough for downstream conveyance. Also, the C-110 Canal east of the C-111 Canal will be filled periodically with 10 earthen plugs to promote downstream re-hydration flooding and sheet flow of its waters.

EPA supports the C-111 SC Western (and prospective Eastern) Project. We recognize the restoration benefits of wetland re-hydration and increased hydroperiods, and the diversion of flows to Florida Bay through Little Madera Bay and Joe Bay to moderate and stabilize salinity for their estuarine flora and fauna. Moreover, the project would re-hydrate the wetlands of the Model Lands enabling thousands of wetland acres to function better and become available for mitigation banking. Compared to the current C-111 Canal discharges into receiving waters, diversion of these canal waters should also improve downstream water quality by creating overland sheet flow. We also understand that project pumping will be controlled to accommodate a project constraint to maintain acceptable low water depths for the endangered Cape Sable Seaside Sparrow. Overall, this proposal would affect some 155,000 acres of uplands, wetlands and estuarine areas (pg. 2-2), and include 776 acres of private land acquisition by the SFWMD sponsor. Response times for re-hydration and salinity-moderation benefits could range from immediate for some sessile and opportunistic species to a slower rebound of up to 10 years for others that would eventually colonize the area or that have long life cycles.

## **Alternatives**

The COE's Recommended Plan (=NEPA preferred alternative) proposed in the DEIS is Alternative 2D Short (2DS), which is a modification of the original Alternative 2D. Alternative 2DS proposes a shorter Aerojet Canal feature that is more compatible with the volume of water available. The original Alternative 2D was consequently renamed as Alternative 2D Long (2DL).

Overall, EPA believes that Alternative 2DS is a reasonable environmental and economic selection. Of the final array of alternatives (1C, 1D, 3D, 2DL, 2DS, 6D), it provides a high habitat unit benefit or "lift", second only to 6D. Alternative 2DS should

also reduce salinity swings in Barnes Sound by reducing freshwater flows through S-197, but increase flows to Florida Bay to moderate salinities there to more historic levels. From a cost perspective, start-up and maintenance costs of Alternative 2DS and 6D were each characterized by the COE as a “Best Buy”; however, 2DS would cost considerably less and provides better relative benefit per habitat unit, even though 6D would benefit more habitat units. Moreover, 2DS is more flexible than 6D as it allows for easier implementation of adaptive management to help resolve uncertainties. Specifically, only 6D would implement a large permanent structure to prevent groundwater flows into the C-111 Canal, which would have to be de-constructed if adaptive management monitoring determines a need. Alternative 6D would also not satisfy the important project constraint of accommodating low water levels for the Seaside Sparrow, while 2DS would regulate its pumping accordingly.

### **Comments & Suggestions**

Beyond the notable overall project benefits outlined above, we offer a few technical and editorial comments to improve the Final EIS (FEIS). Regarding technical issues, we recommend the following for the COE’s consideration:

\* Water Quality – From a water quality perspective, we note that the project’s generation of overland sheet flow should improve water quality when compared to current canal discharges into receiving water bodies. We are also pleased that a project objective is to moderate the hypersaline waters of Little Madera Bay, Joe Bay and Florida Bay to more historic levels associated with estuarine waters. Moreover, we note (pg. 7-14) that total phosphorus levels are predicted to be low (about 5 ppb, compared to the Settlement Agreement standard of 8 ppb) for Taylor Slough waters entering Florida Bay due to ongoing upstream efforts. Regarding chemical contaminants that may be released during the flooding of project areas and affecting water quality of downstream flows, the Frog Pond Detention Area may have the greatest potential for concern. However, page 7-27 indicates that “...scraping to remove the maximum practical amount of soil from the wetted surfaces of the FPDA [Frog Pond Detention Area] would be sufficiently protective of ecological receptors” and that “[a]ll other elements of Alternatives 1D, 2D Short and 2D Long are free of HTRW [hazardous, toxic and radioactive waste] and site contamination issues.” In addition to these benefits, EPA requests additional FEIS discussion on any other water quality benefits provided by the project or that would incidentally result from the project (e.g., sponsor land acquisition, removing this land from farming and potential development).

\* Monitoring – Although project monitoring is referenced in the main document (e.g. Section 5.10.3 and 8.2.2), it is fully discussed in Annex E. While EPA finds this monitoring plan to be adequate overall, we offer the following comments:

+ *Figure E-2*: This figure is confusing and should be clarified in the FEIS to mesh with the accompanying Table E-1 and the discussion. On Figure E-2, the proposed structure S176B should be renamed to S-200, which is the 225 cfs intake pump to the 590-acre water detention basin (since there is no outlet structure, we note that all water

pumped into the detention basin will seep into the surficial aquifer). Also, proposed S177B on Figure E-2 needs to be renamed to S199.

+ *Summary*: We suggest that the main document provide a short summary of the monitoring proposed for the project as well as related issues such as the ecological performance standards to be used to determine project success. Also, what is the process for implementing adaptive management for the project in terms of the timeframe required before a change is authorized and initiated?

\* Environmental Justice (EJ) – Page 5-43 suggests that EJ populations would not be affected by the project and stated that “[s]takeholders meetings with the minority groups took place in 2003 to address concerns.” However, these public concerns were not disclosed or referenced. Accordingly, it is difficult for the public to determine the absence of an EJ effect without such discussion. In addition, such 2003 outreach is now somewhat dated information and may have changed. We also note that page 6-14 indicates that no relocation assistance would be needed or required. The FEIS should more clearly indicate if any residents or businesses would be displaced by the project and, if so, the demographics of those people to be relocated.

\* Invasive Species – Page 7-20 lists several non-native species such as *Melaleuca* that are present in the project area. The DEIS indicates (pg. 7-21) that “[a]ll of the alternatives include redistribution of freshwater into wetland communities that will retard the growth and spread of invasive, non-native plant species.” While this may be true for certain species, certain invasives such as Brazilian Pepper would thrive in such environments. Similarly, *Melaleuca* was presumably intentionally introduced to south Florida many years ago to help convert wetlands to uplands. The FEIS should discuss if the project will attempt to control invasive species on the 776 acres of private lands that are to be purchased since these lands would become fallow and available for opportunistic invasive species.

\* Cumulative Impacts – Cumulative impacts should discuss both negative and positive impacts. As a restoration project, the overall impact of CERP (and the present C-111 SC Western Project component) is positive. The discussion on page 7-32 should therefore be broadened in the FEIS to include the positive effects of other CERP projects relative to the subject C-111 SC Western Project. These include the prospective C-111 SC Eastern Project as well as the ongoing Modified Waters Delivery (MWD) Project and others intended to re-hydrate the Everglades and restore flows to Florida Bay.

Editorially, we suggest additional language for clarity in areas such as the following:

\* Barnes Sound Water Quality – Page 5-38 states that “...supplemental data from the environmental evaluation suggests that Alternative 6D would cause substantial damage to Barnes Sound.” However, the type and magnitude of this damage was not discussed or referenced. Based on Section 7, we note that such damage would be salinity related since 6D would still allow high flows through S-197 (pg. 7-16 and Table 7-2) and

discharges into Barnes Sound, which lowers ambient salinities at the outfall and impacts local marine inhabitants. We suggest that the said “damage” be briefly described (e.g., salinity reductions due to discharges) or that the Section 7 discussion be referenced.

\* Florida Bay Salinities – Page 5-45 states that “...the benefit analysis indicates there could be a decline in salinity conditions for the eastern portions of the Florida Bay as more water is redistributed to the western portion of the project area.” We suggest that “a decline in salinity conditions” be defined parenthetically or replaced with what we assume is intended to mean “an increase in the hypersalinity conditions”.

### **EPA DEIS Rating**

We rate this DEIS as an “LO” (Lack of Objections). EPA supports the C-111 SC Western Project. We believe that this project and its prospective Eastern Project counterpart should benefit the CERP recovery of the Everglades and Florida Bay.

EPA appreciates the opportunity to review the DEIS. Should you have questions regarding these comments, feel free to contact Chris Hoberg of my staff for NEPA issues (404-562-9619 or [hoberg.chris@epa.gov](mailto:hoberg.chris@epa.gov)) and Eric Hughes of the EPA Water Protection Division (located in the Jacksonville District office) for technical issues (904/232-2464 or [Eric.H.Hughes@usace.army](mailto:Eric.H.Hughes@usace.army)).

Sincerely,

A handwritten signature in black ink, appearing to read "Heinz Mueller", with a long horizontal flourish extending to the right.

Heinz J. Mueller, Chief  
NEPA Program Office  
Office of Policy and Management